ABSTRACT

A pump assembly with a combination reciprocating high-pressure seal and fluid inlet check valve for use within brake systems. The pump assembly comprises a housing having a bore formed therethrough and a piston disposed within the bore for reciprocal movement therein. An annular seal is disposed around the piston for reciprocal movement thereon. The piston has at least one passageway formed therein. An inlet flange portion of the piston has at least one passageway formed therein. The passageway, the piston, and the annular seal cooperating to form a check valve assembly. The check valve assembly divides the bore into an inlet chamber and a pumping chamber. The annular seal is moveable to a first position relative to the piston in which the check valve assembly is in a flow-through position to fill the pump chamber with fluid from the inlet chamber during a fluid inlet stroke. The annular seal is moveable to a second position relative to the piston in which the check valve assembly is closed to pressurize the fluid within the pumping chamber during a pumping stroke.